

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Currently amended) A semiconductor device structure with a substantially planar surface, comprising:

a substrate including at least one recess formed therein; and

a material layer disposed over said the substrate and substantially filling said the at least one recess, said the material layer having a substantially planar surface free of abrasive planarization-induced defects.

2. (Withdrawn and currently amended) The semiconductor device structure of claim 1, wherein said the substrate comprises a semiconductor substrate with a surface and said the at least one recess comprises at least one trench recessed in said the surface of said the semiconductor substrate.

3. (Currently amended) The semiconductor device structure of claim 1, wherein said the material layer comprises a mask material.

4. (Currently amended) The semiconductor device structure of claim 3, further comprising at least one conductively doped region continuous with a surface of said the semiconductor substrate and adjacent said the at least one recess.

5. (Withdrawn and currently amended) The semiconductor device structure of claim 1, wherein said the substrate comprises:

a shallow trench isolation structure including a semiconductor device substrate with a surface and at least one trench formed in said the surface of said the semiconductor device substrate;

and

an insulator layer substantially filling said the at least one trench and covering said the surface of said the semiconductor device substrate.

6. (Withdrawn and currently amended) The semiconductor device structure of claim 5, wherein said the insulator layer includes a nonplanar upper surface with at least one peak located substantially above said the surface of said the semiconductor device substrate and at least one valley located substantially above said the at least one trench.

7. (Withdrawn and currently amended) The semiconductor device structure of claim 6, wherein said the material layer comprises a stress buffer layer that substantially fills said the at least one valley in said the insulator layer.

8. (Withdrawn and currently amended) The semiconductor device structure of claim 1, wherein said the substrate comprises:

a semiconductor device structure including a surface with at least one dual damascene trench formed thereon; and

a conductive layer substantially filling said the at least one dual damascene trench and covering said the surface of said the semiconductor device structure.

9. (Withdrawn and currently amended) The semiconductor device structure of claim 8, wherein said the conductive layer includes a nonplanar upper surface with at least one peak located substantially above said the surface of said the semiconductor device structure and at least one valley located substantially above said the at least one dual damascene trench.

10. (Withdrawn and currently amended) The semiconductor device structure of claim 9, wherein said the material layer comprises a stress buffer layer that substantially fills said the at least one valley in said the conductive layer.

11. (Currently amended) The semiconductor device structure of claim 1, wherein said the substrate comprises a stacked capacitor structure and said the at least one recess comprises at least one container recessed in an insulator layer of said the stacked capacitor structure.

12. (Currently amended) The semiconductor device structure of claim 11, wherein said the material layer comprises a mask material, said the mask material substantially filling said the at least one container.

13. (Currently amended) The semiconductor device structure of claim 12, wherein mask material covering a surface of said the insulator layer has a thickness of less than a depth of said the at least one container.

14. (Currently amended) The semiconductor device structure of claim 12, wherein mask material covering a surface of said the insulator layer has a thickness of less than about half a depth of said the at least one container.

15. (Currently amended) A semiconductor device structure with a substantially planar surface, comprising:
a substrate including at least one recess formed therein; and
a material layer disposed at least partially over said the substrate so as to at least partially fill said the at least one recess, said the material layer having a substantially planar surface substantially free of abrasive planarization-induced defects.

16. (Currently amended) The semiconductor device structure of claim 15, wherein at least one region of said the substrate is exposed through said the material layer.

17. (Currently amended) The semiconductor device structure of claim 15, further comprising:

at least one intermediate layer between said the substrate and said the material layer, at least one portion of said the at least one intermediate layer at least partially filling said the at least one recess.

18. (Currently amended) The semiconductor device structure of claim 17, wherein at least one region of said the at least one intermediate layer is exposed through said the material layer.

19. (Currently amended) The semiconductor device structure of claim 17, wherein said the at least one intermediate layer comprises at least one of a mask material, an insulative material, and a conductive material.

20. (Currently amended) The semiconductor device structure of claim 15, wherein said the material layer has a thickness that is less than a depth of said the at least one recess.